Predicting Success
Foresight to maximise Growth and Expansion

TAN Ser Yean
Technical Executive
Business Analytics Software
IBM Software Group – Asia Pacific

Business Analytics software

© 2011 IBM Corporation

Agenda for The Day

- What is Predictive Analytics

- How Predictive Analytics delivers business value

- Customers' Success with Predictive Analytics
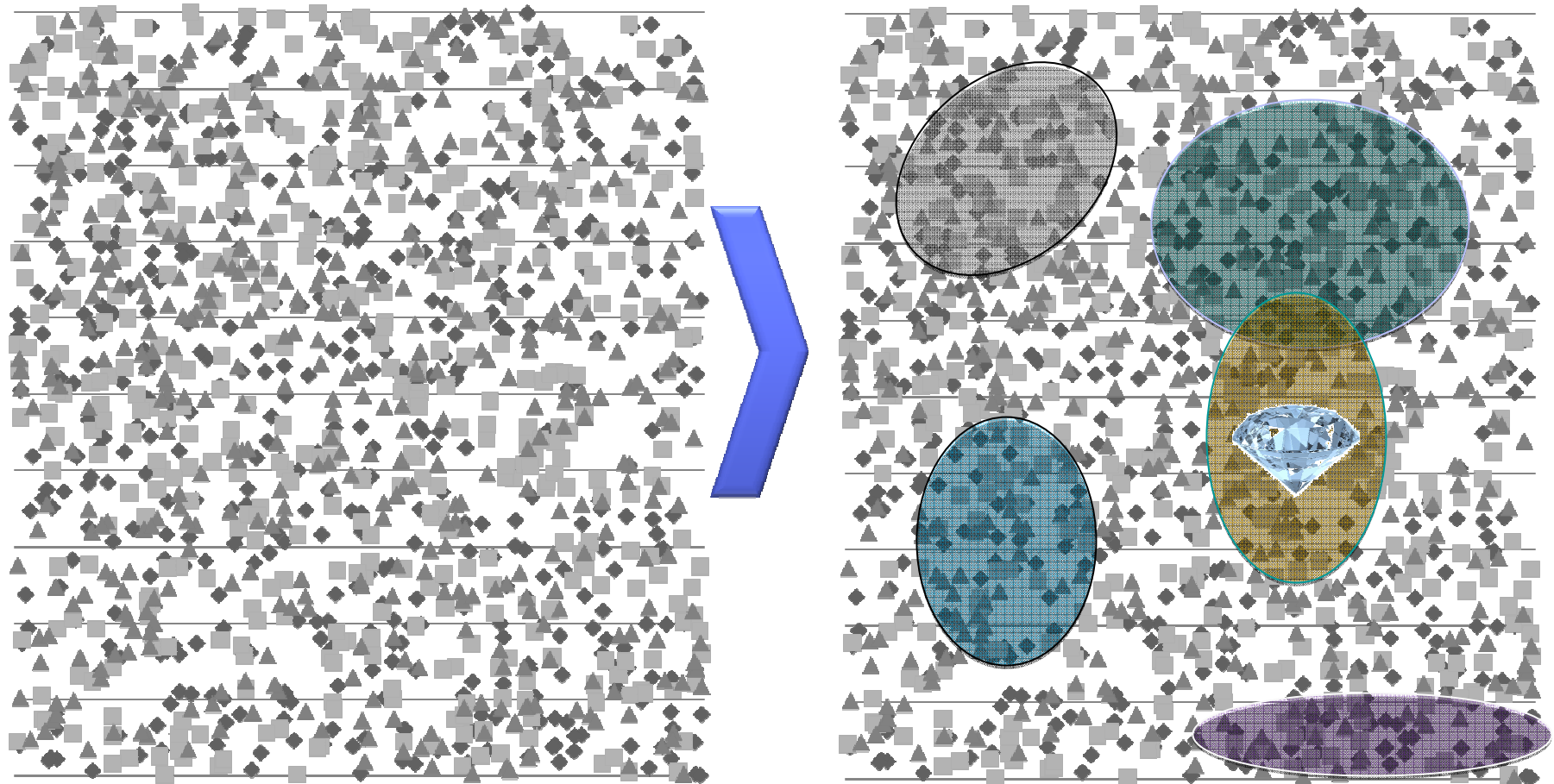
- Why Now?

What is Predictive Analytics

Business Analytics software

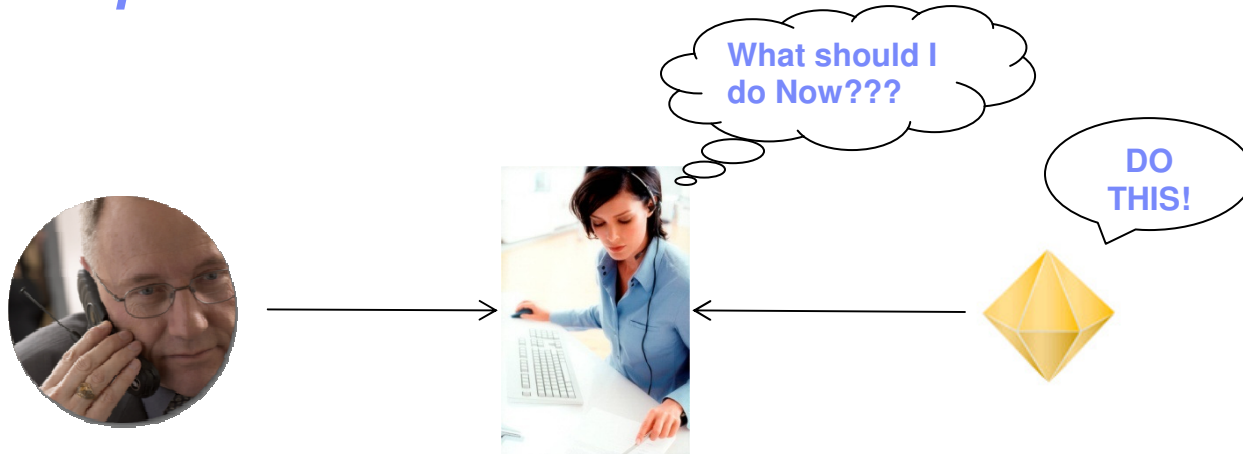# *Data mining is sorting through data to identify patterns and establish relationships.*
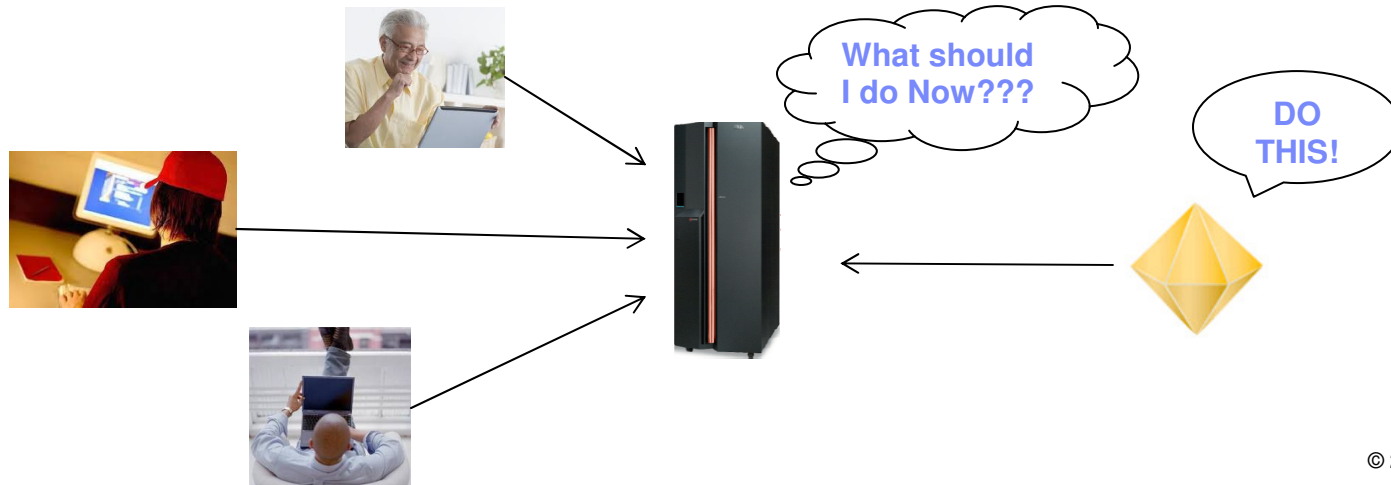
A Universe of Data

The End Game of Predictive Analytics
Deployment: Apply Predictions at the Point of Interaction

Help People Take the Best Course of Action

What should I do Now???

DO THIS!

Help systems Take the Best Course of Action

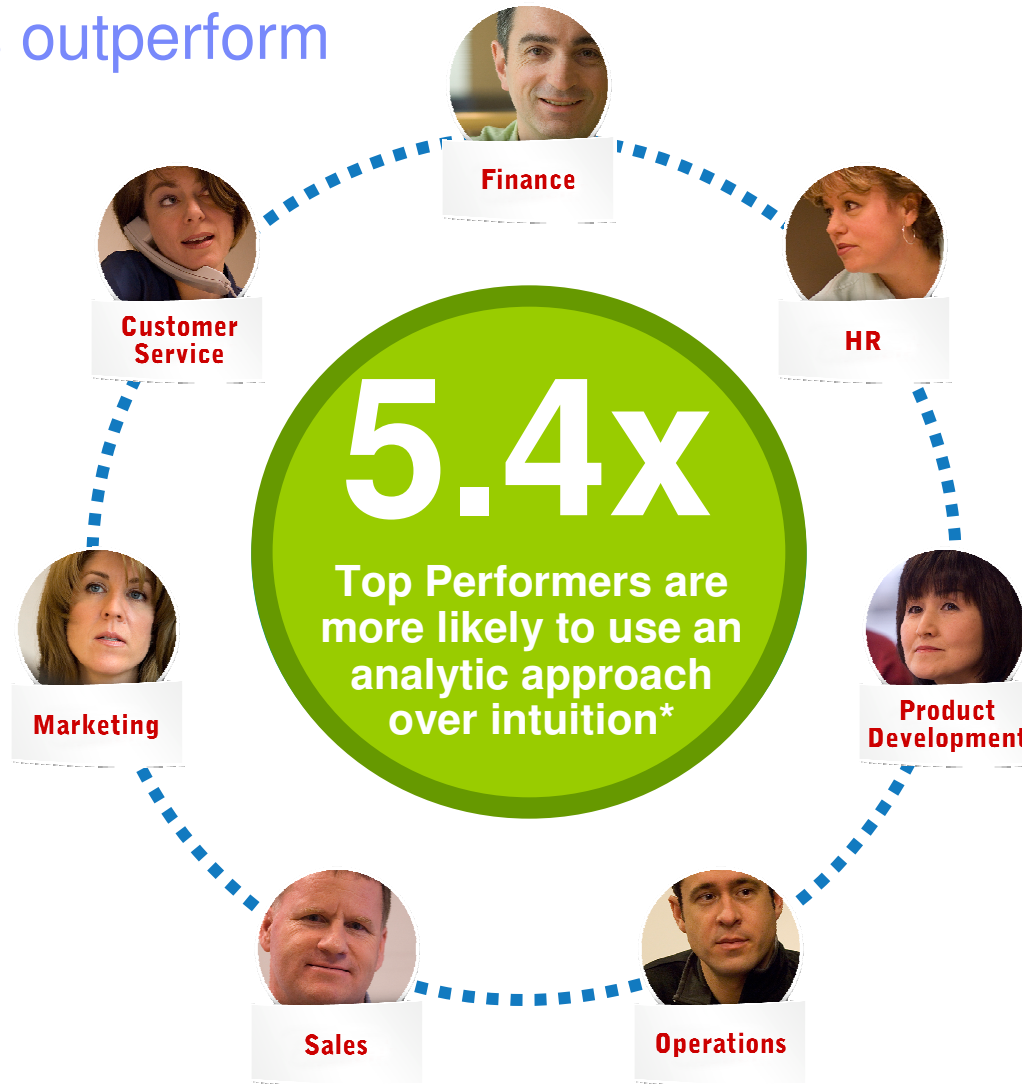*What should I do Now???*

DO THIS!

Predictive analytics helps connect data to effective action by using historical data to draw conclusions about future events.

— *Gareth Herschel, Research Director, Gartner Group*

How Predictive Analytics Deliver Value

Analytics-driven organizations outperform

Finance

HR

Customer Service

Product Development

5.4x

Top Performers are more likely to use an analytic approach over intuition*

Marketing

Sales

Operations

*within business processes

The Predictive Advantage

Predict & Act

Deploying Predictive Models
• Leverage current and historical data
• Make robust predictions on current and future cases
• Embed in business processes to transform decision making and drive better outcomes

"NOW"

Predictive Analytics:
• Algorithms automatically discover significant patterns
• Deliver deep insights to improve strategic and operational decision making
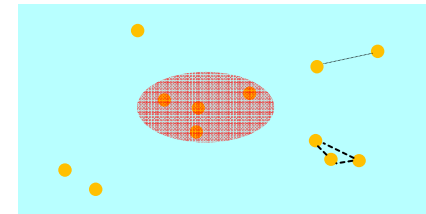• "Learn" from historical data – create *predictive models*

"NOW"

Traditional BI and Conventional Analysis:
• Insight, metrics, etc. up to this point in time
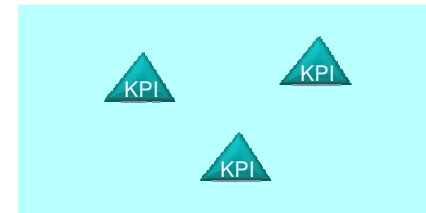• User initiative to explore aggregate data

Sense & Respond
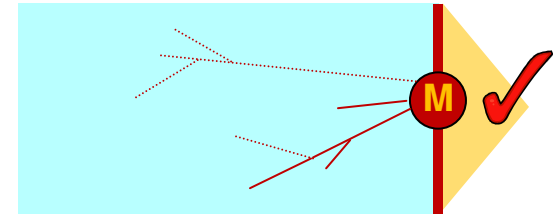
"NOW"

IDC - Independent Financial Impact Studies

"The median ROI for the projects that incorporated predictive technologies was 145%, compared with a median ROI of 89% for those projects that did not."

Source: IDC, "Predictive Analytics and ROI: Lessons from IDC's Financial Impact Study"

Areas of Business Value for Predictive Analytics

Risk

Acquire

Customer Data

Grow

Fraud

Retain

Customers Success

Public Sector Successes

Department	Agency	Need	Results
Treasury	Internal Revenue Service	Profiling Audit Targets	Streamlined audit selection and closure process
DHHS	CDC	Coordinating Disease Information	Multi-modal data collected on E. Coli outbreaks, post-Katrina diseases
DHHS/OIG	Department of Health & Human Services - USA	Detection/Prevention of Medicaid and Medicare Fraud	Identified fraudulent providers
Homeland Security	CBP RESPONDS	Container Security	Detected suspicious inbound cargo

Commercial Sector Successes

Sector	Company	Need	Results
Retail	Advance Auto Parts — Keep the wheels turning.	Market Mix Analysis	Improved availability, overall profitability, higher propensity to move SKUs at stores
Insurance	INFINITY	Insurance Abrogation	Found overpayments and collected millions
Consumer Goods	P&G	Product Design & Customer Sensitivity	Researched key product features to drive increased retail penetration and differentiation
Telecommunications	cablecom	Customer Intimacy	Reduced customer churn from 19% to 2%

A Major US Telco company
improves retention of profitable customers

Background

- Wireless Telco company

- $24.4 billion revenues (2004)

- 43.8 million customers

Business goals

- Reduce the number of profitable customers who defect to competitors

- Understand customer behavior

- Anticipate market trends

Solution

- Added text mining to data mining through PASW Modeler to increase the lift of predictive model

Results

- Improves effectiveness of predictive models by 15%

- **Improves identification of customers most likely to churn**

- **Saves** hundreds of thousands of dollars per year, by targeting the *right* customers with *appropriate* retention offers

The Right Prospect, the Right Offer

- Ambition:
  - Eliminate mailings to prospects least likely to respond
  - Migrate Product Managers from "gut feel" approach to data-based approach

- Less likely to "annoy" customers with unwanted offers

- Mined through past sales data to find best prospects for the product offering

- Easily explain predictive models to product managers

HSBC

- 380 retail branches in US

- 33% fewer mail pieces

- Brought in 95% of the revenue of the previous campaign

- More nimble with timely offers due to short turnaround time

Why Now

Competition and Distractions

Products Proliferation

- TNS Media Intelligence has 2 million brands in its database growing at 700 a day, over 10% a year
- In the 1990s, the number of brands on grocery store shelves tripled from 15,000 to 45,000
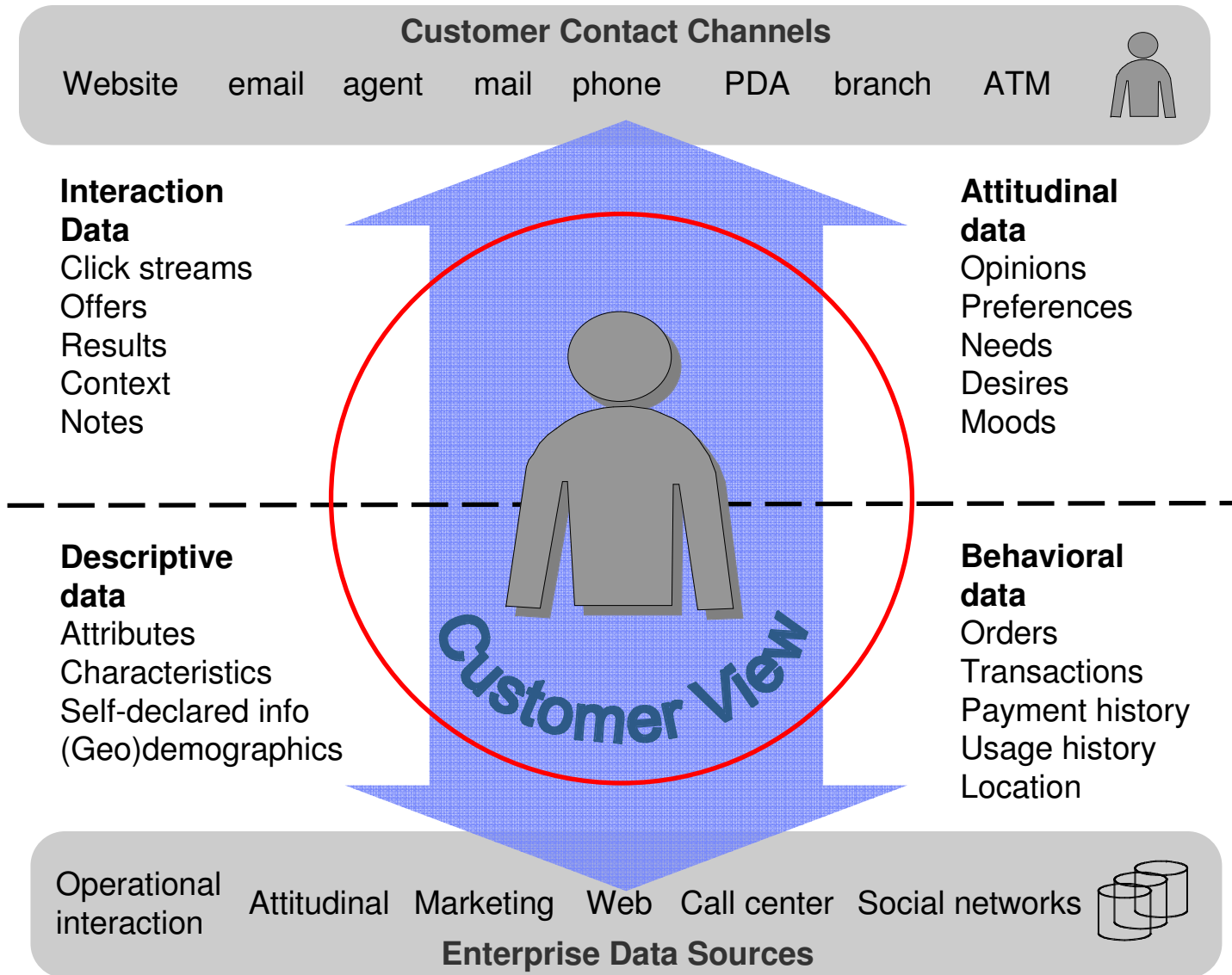
Access Proliferation

- 17,300 magazine titles (8,400 in 1960)
- 13,000 radio stations (4,400 in 1960)
- 82.4 TV channels per home (5.7 in 1960)
- 86.7M unique SNA users (March 2008
- 3.3B cell users linked by GPS & SNA

Media Proliferation

Online Matchmaking

Online Communities

Networks Proliferation

Business Networks

Alumni Networks

Data Volume is Exploding

Customer Contact Channels

Website   email   agent   mail   phone   PDA   branch   ATM

Interaction Data
Click streams
Offers
Results
Context
Notes

Attitudinal data
Opinions
Preferences
Needs
Desires
Moods

Customer View

Descriptive data
Attributes
Characteristics
Self-declared info
(Geo)demographics

Behavioral data
Orders
Transactions
Payment history
Usage history
Location

Operational interaction   Attitudinal   Marketing   Web   Call center   Social networks

Enterprise Data Sources

The Need for Real ROI

- 94% of customers achieved a positive ROI, with an average payback period of 10.7 months

- Key benefits achieved include reduced costs, increased productivity, improved customer & employee satisfaction, and greater visibility into operations

"This is one of the **highest ROI scores Nucleus has ever seen** in its Real ROI series of research reports."

Rebecca Wettemann, Vice President of Research, Nucleus Research

Business Analytics & Optimization Solutions

Industry Solutions

Financial Services	Public	Distribution	Industrial	Communications

Cross-Industry Solutions

Finance	Human Capital	Supply Chain / Operations	Customer

Business Analytics

Business Intelligence	Predictive & Advanced Analytics	Financial Performance & Strategy Management	Governance, Risk & Compliance	Analytic Applications

Information Management and Governance

Information Integration & Master Data Management
Data Warehousing

Content Management	Data Management

Workload Optimized Systems

IBM Business Analytics Advantage:

Data mining is sorting through data to identify patterns and establish relationships.

A Universe of Data